

Lockheed Environmental Systems & Technologies Co.
Lockheed Analytical Services
975 Kelly Johnson Drive Las Vegas, Nevada 89119-3705
Telephone 702-361-0220 800-582-7605 Facsimile 702-361-8146

LK6712-LAS

0045078

LOCKHEED MARTIN

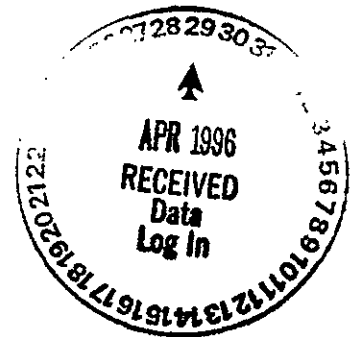
April 12, 1996

Ms. Joan Kessner
Bechtel Hanford, Inc.
P.O. Box 969
1022 Lee Boulevard
Richland, WA 99352



RE: Log-in No.:
Quotation No.:
SAF:
Document File No.:
BHI Document File No.:
SDG No.:

L6712
Q400000-B
B96-098
0329596
343
LK6712



The attached data report contains the analytical results of samples that were submitted to Lockheed Analytical Services on 29 March 1996.

The temperature of the cooler upon receipt was 4°C. Sample containers received agree with the chain-of-custody documentation. Sample containers were received intact. Samples were received in time to meet the analytical holding time requirements.

The case narratives included in the following attachments provide a detailed description of all events that occurred during sample preparation, analysis, and data review specific to the samples and analytical methods requested.

A list of data qualifiers, chain-of-custody forms, sample receiving checklist, and log-in report are also enclosed representing the samples received within this group.

If you have any questions concerning the analysis or the data please call Kathleen Hall at (509) 375-4741.

0003

Lockheed Analytical Services

Log-in No.: L6712
Quotation No.: Q400000-B
SAF: B96-098
Document File No.: 0329596
BHI Document File No.: 343
SDG No.: LK6712
Page1

Release of this data report has been authorized by the Laboratory Director or the Director's designee as evidenced by the following signature.

" I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature."

Sincerely,

A handwritten signature in cursive script, appearing to read "Kathleen M. Hall for".

Kathleen M. Hall
Client Services Representative

cc: Client Services
Document Control

**CASE NARRATIVE
INORGANIC NON METALS ANALYSES**

The routine calibration and quality control analyses performed for this batch include as applicable: initial and continuing calibration verification, initial and continuing calibration blanks, method blank(s), laboratory control sample(s), matrix spike (predigestion) sample(s), duplicate sample(s).

Preparation and Analysis Requirements

- One oil sample was received for LK6712 and analyzed for Method 1010 Ignitability in batch 329 bh for selected analytes as requested on the chain of custody.

Holding Time Requirements

- The sample was received and analyzed within the method-specific holding time.

Kay McCann
Prepared By

April 4, 1996
Date

CASE NARRATIVE INORGANIC METALS ANALYSES

The routine calibration and quality control analyses performed for this batch include as applicable: instrument tune (ICP/MS only), initial and continuing calibration verification, initial and continuing calibration blanks, method blank(s), laboratory control sample(s), ICP interference check samples (ICP only), serial dilutions, analytical (post-digestion) spike samples, matrix spike (predigestion) sample(s), duplicate sample(s).

Preparation and Analysis Requirements

- Eight oil samples for metals analysis. The samples were prepared and analyzed as LAS Batch 329BHE and analyzed for selected analytes as requested on the chain of custody. Sample BOH8T7 (L6712-10) was used for matrix spike, duplicate, post-digestion spike analyses. All flags due to the performance of the above-mentioned QC sample are also associated with every sample digested with this batch.

Holding Time Requirements

- All samples were analyzed within the method-specific holding times.

Method Blanks

- The concentration levels of all the requested analytes in the method blank were below the reporting detection limits.

Internal Quality Control

All Internal Quality Control were within acceptance limits with the following exceptions:

- The matrix spike recovered outside the control limits for mercury and silver. However, the acceptable recoveries for the oil LCS for these analytes indicates that the analytical system was operating correctly and that the out-of-control recovery may be attributed to matrix interferences. All these analytes results are flagged with a "N". A post-digestion spike for silver was performed on the sample. Results are provided on form 5B.

Lockheed Analytical Services

Log-in No.: L6712
Quotation No.: Q400000-B
SAF: B96-098
Document File No.: 0329596
BHI Document File No.:343
SDG No.: LK6712
Page4

Sample Results

- The methods and associated qualifies used for analyte determination and reporting are as follows:

"P" ICPAES Trace- Method CLP ILMO3.0

"AV" Cold Vapor AA- CLP ILMO3.0

Hongsheng Li

Prepared By

04/11/96

Date

0007

LOCKHEED ANALYTICAL SERVICES
LOGIN CHAIN OF CUSTODY REPORT (1n01)
Apr 03 1996, 08:00 am

*Revision
METALS*

Login Number: L6712
Account: 596 Bechtel Hanford, Inc. * Richland, WA
Project: BECHTEL-HANFORD - Bechtel Hanford Project

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L6712-1 TEMP 4 Location: 156TMP-1 Oil 6 S SCREENING	BOH8T7	27-MAR-96	29-MAR-96	13-APR-96
L6712-2 TEMP 4 Location: 156TMP-1 Oil 6 S SCREENING	BOH8T8	27-MAR-96	29-MAR-96	13-APR-96
L6712-3 TEMP 4 Location: 156TMP-1 Oil 6 S SCREENING	BOH8V0	27-MAR-96	29-MAR-96	13-APR-96
L6712-4 TEMP 4 Location: 156TMP-1 Oil 6 S SCREENING	BOH8V1	27-MAR-96	29-MAR-96	13-APR-96
L6712-5 TEMP 4 Location: 156TMP-1 Oil 6 S SCREENING	BOH8V2	27-MAR-96	29-MAR-96	13-APR-96
L6712-6 TEMP 4 Location: 156TMP-1 Oil 6 S SCREENING	BOH8V4	27-MAR-96	29-MAR-96	13-APR-96
L6712-7 TEMP 4 Location: 156TMP-1 Oil 6 S SCREENING	BOH8V5	27-MAR-96	29-MAR-96	13-APR-96
L6712-8 TEMP 4 Location: 156TMP-1 Oil 6 S SCREENING	BOH8V6	27-MAR-96	29-MAR-96	13-APR-96
L6712-9 TEMP 4 Location: 156TMP-1 Oil 6 S 1010 IGNITABILITY	BOH8T7	27-MAR-96	29-MAR-96	13-APR-96
		Hold:05-APR-96		

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (1n01)
 Apr 03 1996, 08:00 am

Login Number: L6712
 Account: 596 Bechtel Hanford, Inc. * Richland, WA
 Project: BECHTEL-HANFORD - Bechtel Hanford Project

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
* L6712-10 TEMP 4 "TCLP=M" Location: 156TMP-1 Oil 6 S 1311 TCLP REG. EXTR. Hold:10-APR-96 TCLP Extr 13 S 6010 ICP METALS Hold:23-SEP-96 TCLP Extr 13 S 6010 ICP TRACE Hold:23-SEP-96 TCLP Extr 13 S 7470 MERCURY Hold:24-APR-96	BOH8T7	27-MAR-96	29-MAR-96	13-APR-96
* L6712-11 TEMP 4 "TCLP=M" Location: 156TMP-1 Oil 6 S 1311 TCLP REG. EXTR. Hold:10-APR-96 TCLP Extr 13 S 6010 ICP METALS Hold:23-SEP-96 TCLP Extr 13 S 6010 ICP TRACE Hold:23-SEP-96 TCLP Extr 13 S 7470 MERCURY Hold:24-APR-96	BOH8T8	27-MAR-96	29-MAR-96	13-APR-96
* L6712-12 TEMP 4 "TCLP=M" Location: 156TMP-1 Oil 6 S 1311 TCLP REG. EXTR. Hold:10-APR-96 TCLP Extr 13 S 6010 ICP METALS Hold:23-SEP-96 TCLP Extr 13 S 6010 ICP TRACE Hold:23-SEP-96 TCLP Extr 13 S 7470 MERCURY Hold:24-APR-96	BOH8V0	27-MAR-96	29-MAR-96	13-APR-96
* L6712-13 TEMP 4 "TCLP=M" Location: 156TMP-1 Oil 6 S 1311 TCLP REG. EXTR. Hold:10-APR-96 TCLP Extr 13 S 6010 ICP METALS Hold:23-SEP-96 TCLP Extr 13 S 6010 ICP TRACE Hold:23-SEP-96 TCLP Extr 13 S 7470 MERCURY Hold:24-APR-96	BOH8V1	27-MAR-96	29-MAR-96	13-APR-96
* L6712-14 TEMP 4 "TCLP=M" Location: 156TMP-1 Oil 6 S 1311 TCLP REG. EXTR. Hold:10-APR-96 TCLP Extr 13 S 6010 ICP METALS Hold:23-SEP-96 TCLP Extr 13 S 6010 ICP TRACE Hold:23-SEP-96 TCLP Extr 13 S 7470 MERCURY Hold:24-APR-96	BOH8V2	27-MAR-96	29-MAR-96	13-APR-96
* L6712-15 TEMP 4 "TCLP=M" Location: 156TMP-1 Oil 6 S 1311 TCLP REG. EXTR. Hold:10-APR-96	BOH8V4	27-MAR-96	29-MAR-96	13-APR-96

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 0329596

LOCKHEED ANALYTICAL SERVICES
LOGIN CHAIN OF CUSTODY REPORT (ln01)
Apr 03 1996, 08:00 am

Login Number: L6712
Account: 596 Bechtel Hanford, Inc. * Richland, WA
Project: BECHTEL-HANFORD - Bechtel Hanford Project

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
TCLP Extr 13 S 6010	ICP METALS	Hold:23-SEP-96		
TCLP Extr 13 S 6010	ICP TRACE	Hold:23-SEP-96		
TCLP Extr 13 S 7470	MERCURY	Hold:24-APR-96		
* L6712-16	BOH8V5	27-MAR-96	29-MAR-96	13-APR-96
TEMP 4 "TCLP=M"				
Location: 156TMP-1				
Oil 6 S 1311	TCLP REG. EXTR.	Hold:10-APR-96		
TCLP Extr 13 S 6010	ICP METALS	Hold:23-SEP-96		
TCLP Extr 13 S 6010	ICP TRACE	Hold:23-SEP-96		
TCLP Extr 13 S 7470	MERCURY	Hold:24-APR-96		
* L6712-17	BOH8V6	27-MAR-96	29-MAR-96	13-APR-96
TEMP 4 "TCLP=M"				
Location: 156TMP-1				
Oil 6 S 1311	TCLP REG. EXTR.	Hold:10-APR-96		
TCLP Extr 13 S 6010	ICP METALS	Hold:23-SEP-96		
TCLP Extr 13 S 6010	ICP TRACE	Hold:23-SEP-96		
TCLP Extr 13 S 7470	MERCURY	Hold:24-APR-96		
L6712-18	REPORT TYPE	29-MAR-96	29-MAR-96	13-APR-96
Location:				
Water 1 S	EDD - DISK DEL.			
Water 1 S	GERMANN			
Water 1 S	INORG TYPE 2 RPT			

* CHANGED 7000 FURNACE TO 6010 ICP TRACE
PER K. HALL/PROJECT SUMMARY

Signature: R. Callison

Date: 4-3-96

0012

032959

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Mar 29 1996, 04:53 pm

Login Number: L6712
 Account: 596 Bechtel Hanford, Inc. * Richland, WA
 Project: BECHTEL-HANFORD Bechtel Hanford Project

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L6712-1 TEMP 4 Location: 157 Oil 6 S SCREENING	BOH8T7	27-MAR-96	29-MAR-96	13-APR-96
L6712-2 TEMP 4 Location: 157 Oil 6 S SCREENING	BOH8T8	27-MAR-96	29-MAR-96	13-APR-96
L6712-3 TEMP 4 Location: 157 Oil 6 S SCREENING	BOH8V0	27-MAR-96	29-MAR-96	13-APR-96
L6712-4 TEMP 4 Location: 157 Oil 6 S SCREENING	BOH8V1	27-MAR-96	29-MAR-96	13-APR-96
L6712-5 TEMP 4 Location: 157 Oil 6 S SCREENING	BOH8V2	27-MAR-96	29-MAR-96	13-APR-96
L6712-6 TEMP 4 Location: 157 Oil 6 S SCREENING	BOH8V4	27-MAR-96	29-MAR-96	13-APR-96
L6712-7 TEMP 4 Location: 157 Oil 6 S SCREENING	BOH8V5	27-MAR-96	29-MAR-96	13-APR-96
L6712-8 TEMP 4 Location: 157 Oil 6 S SCREENING	BOH8V6	27-MAR-96	29-MAR-96	13-APR-96
L6712-9 TEMP 4 Location: 157 Oil 6 S 1010 IGNITABILITY	BOH8T7	27-MAR-96	29-MAR-96	13-APR-96
		Hold:05-APR-96		

0013
 0329596

LOCKHEED ANALYTICAL SERVICES
 LOGIN CHAIN OF CUSTODY REPORT (ln01)
 Mar 29 1996, 04:53 pm

Login Number: L6712
 Account: 596 Bechtel Hanford, Inc. * Richland, WA
 Project: BECHTEL-HANFORD Bechtel Hanford Project

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
L6712-10 TEMP 4 "TCLP=M" Location: 157 Oil 6 S 1311 TCLP REG. EXTR. TCLP Extr 13 S 6010 ICP METALS TCLP Extr 13 S 7000 FURNACE METALS TCLP Extr 13 S 7470 MERCURY	BOH8T7	27-MAR-96	29-MAR-96	13-APR-96
L6712-11 TEMP 4 "TCLP=M" Location: 157 Oil 6 S 1311 TCLP REG. EXTR. TCLP Extr 13 S 6010 ICP METALS TCLP Extr 13 S 7000 FURNACE METALS TCLP Extr 13 S 7470 MERCURY	BOH8T8	27-MAR-96	29-MAR-96	13-APR-96
L6712-12 TEMP 4 "TCLP=M" Location: 157 Oil 6 S 1311 TCLP REG. EXTR. TCLP Extr 13 S 6010 ICP METALS TCLP Extr 13 S 7000 FURNACE METALS TCLP Extr 13 S 7470 MERCURY	BOH8V0	27-MAR-96	29-MAR-96	13-APR-96
L6712-13 TEMP 4 "TCLP=M" Location: 157 Oil 6 S 1311 TCLP REG. EXTR. TCLP Extr 13 S 6010 ICP METALS TCLP Extr 13 S 7000 FURNACE METALS TCLP Extr 13 S 7470 MERCURY	BOH8V1	27-MAR-96	29-MAR-96	13-APR-96
L6712-14 TEMP 4 "TCLP=M" Location: 157 Oil 6 S 1311 TCLP REG. EXTR. TCLP Extr 13 S 6010 ICP METALS TCLP Extr 13 S 7000 FURNACE METALS TCLP Extr 13 S 7470 MERCURY	BOH8V2	27-MAR-96	29-MAR-96	13-APR-96
L6712-15 TEMP 4 "TCLP=M" Location: 157 Oil 6 S 1311 TCLP REG. EXTR.	BOH8V4	27-MAR-96	29-MAR-96	13-APR-96

LOCKHEED ANALYTICAL SERVICES
LOGIN CHAIN OF CUSTODY REPORT (ln01)
Mar 29 1996, 04:53 pm

Login Number: L6712
Account: 596 Bechtel Hanford, Inc. * Richland, WA
Project: BECHTEL-HANFORD Bechtel Hanford Project

Laboratory Sample Number	Client Sample Number	Collect Date	Receive Date	Due PR Date
TCLP Extr 13 S 6010	ICP METALS	Hold:23-SEP-96		
TCLP Extr 13 S 7000	FURNACE METALS	Hold:23-SEP-96		
TCLP Extr 13 S 7470	MERCURY	Hold:24-APR-96		
L6712-16	BOH8V5	27-MAR-96	29-MAR-96	13-APR-96
TEMP 4 "TCLP=M"				
Location: 157				
Oil 6 S 1311	TCLP REG. EXTR.	Hold:10-APR-96		
TCLP Extr 13 S 6010	ICP METALS	Hold:23-SEP-96		
TCLP Extr 13 S 7000	FURNACE METALS	Hold:23-SEP-96		
TCLP Extr 13 S 7470	MERCURY	Hold:24-APR-96		
L6712-17	BOH8V6	27-MAR-96	29-MAR-96	13-APR-96
TEMP 4 "TCLP=M"				
Location: 157				
Oil 6 S 1311	TCLP REG. EXTR.	Hold:10-APR-96		
TCLP Extr 13 S 6010	ICP METALS	Hold:23-SEP-96		
TCLP Extr 13 S 7000	FURNACE METALS	Hold:23-SEP-96		
TCLP Extr 13 S 7470	MERCURY	Hold:24-APR-96		
L6712-18	REPORT TYPE	29-MAR-96	29-MAR-96	13-APR-96
Location:				
Water 1 S	EDD - DISK DEL.			
Water 1 S	GERMANN			
Water 1 S	INORG TYPE 2 RPT			

Signature: Paul Davis

Date: 3-29-96 0015

0329596

Bechtel Hanford, Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Page ____ of ____

Collector Doug Bowers	Company Contact W. S. Thompson	Telephone (509) 376-8031	Data Turnaround <input type="checkbox"/> Priority <input checked="" type="checkbox"/> Normal
Project Designation 181-N & 182-N Used Oil Waste Designation	Sampling Location 190-N 100N Area	SAF No. B96-098	
Ice Chest No. SML 527	Field Logbook No. EFL 1133-1	Method of Shipment AIR	
Shipped To Lockheed	Offsite Property No. W96-0-0640-36	Bill of Lading/Air Bill No. 290 4654 067	
Possible Sample Hazards/Remarks	Preservation None	None	

Sample No.	Matrix*	Date Sampled	Time Sampled	EPA 1010 Ignitability	TCLP Metals (see Note #1)	Activity Scan														
B0H8V5	OIL	3/27/96	1002		X	X														
B0H8V6	OIL	3/27/96	1055		X	X														

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix* S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By Doug Bowers	Date/Time 3-27-96/1437	Received By K. Trapp	Date/Time 3/27/96	Note 1: Metals by ICP (TCLP) - 1311/6010A, Barium, Cadmium, Chromium, Silver; Arsenic (TCLP) - 1311/7060; Lead (TCLP) - 1311/7420; Selenium (TCLP) - 1311/7740; Mercury (TCLP) - 1311/7470.		
Relinquished By K. Trapp	Date/Time 3/28/96 1130	Received By	Date/Time			
Relinquished By	Date/Time	Received By	Date/Time			
LABORATORY SECTION	Received By Paul Davis	Title Sample Custodian		Date/Time 3-29-96/14:45		
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time		

76594

0016

Bechtel Hanford, Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						L6712		Page ____ of ____		
Collector Doug Bowers		Company Contact W. S. Thompson				Telephone (509) 376-8031		Data Turnaround <input type="checkbox"/> Priority <input checked="" type="checkbox"/> Normal				
Project Designation 181-N & 182-N Used Oil Waste Designation		Sampling Location 190-N 100N Area				SAF No. B96-098						
Ice Chest No. SML 527		Field Logbook No. EFL 1133-1				Method of Shipment AIR		Bill of Lading/Air Bill No. 290 4654 067				
Shipped To Lockheed		Offsite Property No. W96-0-0640-36										
Possible Sample Hazards/Remarks		Preservation		None	None	None						
Samples are oil samples for analysis.		Type of Container		G	G	G/P						
		No. of Container(s)		1	1	1						
Special Handling and/or Storage		Volume		125 ml.	250 ml.	20 ml						
SAMPLE ANALYSIS				EPA 1010 Ignitability	TCPL Metals (see Note #1)	Activity Scan						
Sample No.	Matrix*	Date Sampled	Time Sampled									
B0H8T7	OIL	3/27/96	0812	X	X	X						
B0H8T8	OIL	3/27/96	0830		X	X						
B0H8V0	OIL	3/27/96	0850		X	X						
B0H8V1	OIL	3/27/96	0908		X	X						
B0H8V2	OIL	3/27/96	0935		X	X						
B0H8V4	OIL	3/27/96	1002		X	X						
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS				Matrix*		
Relinquished By <i>Doug Bowers</i>		Date/Time 3-27-96/1431		Received By <i>K. J. Trapp</i>		Date/Time 3/27/96		Note 1: Metals by ICP (TCLP) - 1311/6010A, Barium, Cadmium, Chromium, Silver; Arsenic (TCLP) - 1311/7060; Lead (TCLP) - 1311/7420; Selenium (TCLP) - 1311/7740; Mercury (TCLP) - 1311/7470.				S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other
Relinquished By <i>K. J. Trapp</i>		Date/Time 3/28/96 1135		Received By		Date/Time						
Relinquished By		Date/Time		Received By		Date/Time						
Relinquished By		Date/Time		Received By		Date/Time						
LABORATORY SECTION		Received By <i>Paul C. Davis</i>		Title <i>Sample Custodian</i>		Date/Time 3-29-96/14:45						
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time						

0329546

017

VALIDATED RESULTS SHORT REPORT

28 Mar 1996

Customer ID: BOH8T7
Lab Sample#: S96E000331

Sample Date: 03/27/96 08:12
Recv. Date: 03/27/96 14:07

PARAMETER	RESULTS	UNITS
Total Activity by LSC	13.1	%Uncertainty
Total Act. by LSC: % Uncert.	< 8.19e-6	uCi/g
Total Activity by LSC (Solid)		

Customer ID: BOH8T8
Lab Sample#: S96E000332

Sample Date: 03/27/96 08:30
Recv. Date: 03/27/96 14:07

PARAMETER	RESULTS	UNITS
Total Activity by LSC	16.1	%Uncertainty
Total Act. by LSC: % Uncert.	< 8.94e-6	uCi/g
Total Activity by LSC (Solid)		

Customer ID: BOH8V0
Lab Sample#: S96E000334

Sample Date: 03/27/96 08:50
Recv. Date: 03/27/96 14:07

PARAMETER	RESULTS	UNITS
Total Activity by LSC	3.4	%Uncertainty
Total Act. by LSC: % Uncert.	< 1.74e-6	uCi/g
Total Activity by LSC (Solid)		

Customer ID: BOH8V1
Lab Sample#: S96E000335

Sample Date: 03/27/96 09:08
Recv. Date: 03/27/96 14:07

PARAMETER	RESULTS	UNITS
Total Activity by LSC	11.2	%Uncertainty
Total Act. by LSC: % Uncert.	1.82e-5	uCi/g
Total Activity by LSC (Solid)		

Customer ID: BOH8V2
Lab Sample#: S96E000336

Sample Date: 03/27/96 09:35
Recv. Date: 03/27/96 14:07

PARAMETER	RESULTS	UNITS
Total Activity by LSC	7.38	%Uncertainty
Total Act. by LSC: % Uncert.	1.98e-4	uCi/g
Total Activity by LSC (Solid)		

Customer ID: BOH8V4
Lab Sample#: S96E000338

Sample Date: 03/27/96 10:00
Recv. Date: 03/27/96 14:07

PARAMETER	RESULTS	UNITS
Total Activity by LSC	18.26	%Uncertainty
Total Act. by LSC: % Uncert.	< 1.07e-5	uCi/g
Total Activity by LSC (Solid)		

VALIDATED RESULTS SHORT REPORT

28 Mar 1

Customer ID: BOH8V5
Lab Sample#: S96E000339

Sample Date: 03/27/96 10:0
Recv. Date: 03/27/96 14:0

PARAMETER	RESULTS	UNITS
Total Activity by LSC		
Total Act. by LSC: % Uncert.	16.5	%Uncertainty
Total Activity by LSC (Solid)	< 1.73e-5	uCi/g

Customer ID: BOH8V6
Lab Sample#: S96E000340

Sample Date: 03/27/96 10:5
Recv. Date: 03/27/96 14:0

PARAMETER	RESULTS	UNITS
Total Activity by LSC		
Total Act. by LSC: % Uncert.	12.1	%Uncertainty
Total Activity by LSC (Solid)	< 1.01E-5	uCi/g

0019

0329594

NON-RADIOLOGICAL SHIPMENT RELEASE

The contents of this shipment #W96-0-0640-36 have been reviewed and contains no radioactive material and therefore, are not subject to radiological control requirements.

Original signed by:



Kris A. Smith, Manager
Project Radiological Controls

SAMPLE CHECK-IN LIST

Date/Time Received: 3-29-96 / 14:35

SDG#: 1112

Work Order Number: 111A

SAF #: 396-098

Shipping Container ID: 5mL 527 Chain of Custody #: 111B

1. Custody Seals on shipping container intact? Yes ☒ No ☐
2. Custody Seals dated and signed? Yes ☒ No ☐
3. Sample temperature 4°C
4. Vermiculite/packing materials is Wet ☐ Dry ☒
5. Each sample is in a plastic bag? Yes ☒ No ☐
6. Sample holding times exceeded? Yes ☐ No ☒

7. Samples have:

☒ tape ☐ hazard labels
☐ custody seals ☐ appropriate sample labels

8. Samples are:

☒ in good condition ☐ leaking
☐ broken ☐ have air bubbles

9. Is the information on the COC and Sample bottles in agreement?

Yes ☒

No ☐

Notes: _____

Sample Custodian/Laboratory: Paula Jones / LAS Date: 3-29-96

Telephoned To: Kathleen Hall On 3-29-96 By Paula Jones

Per 3-29-96

LOCKHEED MARTIN

Sample Login Login Review Checklist

Lot Number L6712

The login review should be conducted by that person logging in the samples as well as a peer. Please use this checklist to ensure that such reviews occur in a uniform basis. Please sign and date below to verify that a login review has occurred. This checklist should be affixed to each login package prior to distribution.

For effective login review, at a minimum, five reports from the login process are required. These are the COC (or equivalent), the login COC report, the sample summary report, the sample receiving checklist, and the login quotation. Before beginning review, ensure that these five components are available. Jobs with single component samples, the sample summary report may be omitted.

SAMPLE SUMMARY REPORT

	<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>Comment</u>
1. Are all sample ID's correct?	<u>X</u>	—	—	_____
2. Are all samples present?	<u>X</u>	—	—	_____
3. Are all matrices indicated correctly?	<u>X</u>	—	—	_____
4. Are all analyses on the COC logged in for the appropriate samples?	<u>X</u>	—	—	_____
5. Are all analyses logged in for the correct container?	<u>X</u>	—	—	_____
6. Are samples logged in according to LAS batching procedures?	<u>X</u>	—	—	_____

LOGIN CHAIN OF CUSTODY

	<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>Comment</u>
1. Are the collect, receive, and due dates correct for every sample?	<u>X</u>	—	—	_____
2. Have all appropriate comments been indicated in the comment section?	<u>X</u>	—	—	_____

SAMPLE RECEIVING CHECKLIST

	<u>YES</u>	<u>NO</u>	<u>N/A</u>	<u>Comment</u>
1. Are all discrepancies between the COC and the login noted (if applicable)?	—	—	<u>X</u>	_____

Paula D. [Signature] 3-29-86
primary review signature date

[Signature]
secondary review signature

3-29-86 022
date

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Lockheed Analytical Services
Sample Receiving Checklist

Page 1 of

Client Name: *Bechtel Hanford*

Job No. *L6712*

Cooler ID: *N/A*

COOLER CONDITION UPON RECEIPT

Temperature of cooler upon receipt: *42*

temperature of temp. blank upon receipt: *—*

	Yes	No	* Comments/Discrepancies
custody seals intact	<i>X</i>		
chain of custody present	<i>X</i>		
blue ice (or equiv.) present/frozen	<i>X</i>		
rad survey completed	<i>X</i>		

SAMPLE CONDITION UPON RECEIPT

	Yes	No	* Comments/Discrepancies
all bottles labeled	<i>X</i>		
samples intact	<i>X</i>		
proper container used for sample type	<i>X</i>		
sample volume sufficient for analysis	<i>X</i>		
proper pres. indicated on the COC	<i>X</i>		
VOA's contain headspace			<i>N/A</i>
are samples bi-phasic (if so, indicate sample ID'S):			<i>N/A</i>

MISCELLANEOUS ITEMS

	Yes	No	* Comments/Discrepancies
samples with short holding times		<i>X</i>	
samples to subcontract			<i>N/A</i>

ADDITIONAL COMMENTS/DISCREPANCIES

Completed by / date: *Paul D. [Signature]* *3-29-96*

Sent to the client (date/initials): *Paul D. [Signature]* ** Client's signature upon receipt:

Notes: * = contact the appropriate CSR of any discrepancies immediately upon receipt

** = please review this information and return via facsimile to the appropriate CSR (702) 361-8146

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 version 2.0 (11/11/94)

Lockheed Analytical Laboratory
SAMPLE SUMMARY REPORT (su02)
Bechtel Hanford, Inc. * Richland, WA

Client Sample Number	LAL Sample Number	SDG Number	Matrix	Method
BOH8T7 -	L6712-1		Oil	SCREENING -
	L6712-9		Oil	1010 IGNITABILITY
	L6712-10		Oil	1311 TCLP REG. I
	L6712-10		TCLP Extr	6010 ICP METALS
	L6712-10		TCLP Extr	7000 FURNACE ME
	L6712-10		TCLP Extr	7470 MERCURY -
BOH8T8 -	L6712-2		Oil	SCREENING -
	L6712-11		Oil	1311 TCLP REG. I
	L6712-11		TCLP Extr	6010 ICP METALS
	L6712-11		TCLP Extr	7000 FURNACE ME
	L6712-11		TCLP Extr	7470 MERCURY-
BOH8V0 -	L6712-3		Oil	SCREENING -
	L6712-12		Oil	1311 TCLP REG. I
	L6712-12		TCLP Extr	6010 ICP METALS
	L6712-12		TCLP Extr	7000 FURNACE ME
	L6712-12		TCLP Extr	7470 MERCURY -
BOH8V1 -	L6712-4		Oil	SCREENING -
	L6712-13		Oil	1311 TCLP REG. I
	L6712-13		TCLP Extr	6010 ICP METALS
	L6712-13		TCLP Extr	7000 FURNACE ME
	L6712-13		TCLP Extr	7470 MERCURY -
BOH8V2 -	L6712-5		Oil	SCREENING -
	L6712-14		Oil	1311 TCLP REG. I
	L6712-14		TCLP Extr	6010 ICP METALS
	L6712-14		TCLP Extr	7000 FURNACE ME
	L6712-14		TCLP Extr	7470 MERCURY -
BOH8V4 -	L6712-6		Oil	SCREENING -
	L6712-15		Oil	1311 TCLP REG. I
	L6712-15		TCLP Extr	6010 ICP METALS
	L6712-15		TCLP Extr	7000 FURNACE ME
	L6712-15		TCLP Extr	7470 MERCURY -
BOH8V5 -	L6712-7		Oil	SCREENING -
	L6712-16		Oil	1311 TCLP REG. I
	L6712-16		TCLP Extr	6010 ICP METALS
	L6712-16		TCLP Extr	7000 FURNACE ME
	L6712-16		TCLP Extr	7470 MERCURY-
BOH8V6 -	L6712-8		Oil	SCREENING -
	L6712-17		Oil	1311 TCLP REG. I
	L6712-17		TCLP Extr	6010 ICP METALS
	L6712-17		TCLP Extr	7000 FURNACE ME
	L6712-17		TCLP Extr	7470 MERCURY -
REPORT TYPE -	L6712-18		Water	EDD - DISK DEL.
	L6712-18		Water	GERMANN -
	L6712-18		Water	INORG TYPE 2 RP

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LOCKHEED ANALYTICAL SERVICES

Sample Results

Client Sample ID: BOH8T7	Date Collected: 27-MAR-96
Matrix: Oil	Date Received: 29-MAR-96
Percent Solids: N/A	

Constituent	Units	Method	Result	Project Reporting Limit	Data Qualifier(s)	Date Analyzed	LAS Batch ID	LAS Sample ID
Ignitability	Deg. C	1010	0.00	N/A	NO FLASH	03-APR-96	35495	L6712-9

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: L.A.S. _____ Contract: BECHTEL _____
Lab Code: LOCK _____ Case No.: 329BHE SAS No.: _____ SDG No.: L6712L
SOW No.: 3/90 _____

CLIENT ID NO.	Lab Sample ID
BOH8T7	L6712-10
BOH8T7D	L6712-10D
BOH8T7S	L6712-10S
BOH8T8	L6712-11
BOH8V0	L6712-12
BOH8V1	L6712-13
BOH8V2	L6712-14
BOH8V4	L6712-15
BOH8V5	L6712-16
BOH8V6	L6712-17
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Were ICP interelement corrections applied ? Yes/No YES

Were ICP background corrections applied ? Yes/No YES

If yes - were raw data generated before
application of background corrections ? Yes/No NO

Comments:

Written by : *Hongsheng Li* Name: HONGSHENG LI
Date: 4/11/96 Title: SCIENTIST

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Reviewed by: *Cheryl A. Schlosslin* Name: *Cheryl A. Schlosslin*
Date: 4/12/96 Title: *Metals head*

1

CLIENT ID NO.

0029

1

CLIENT ID NO.

B0H8V0

% Solids:	100.0
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Concentration Units (ug/L or MG/L dry weight): MG/L

Comments:

OIL

0031

1

INORGANIC ANALYSES DATA SHEET

BOH8V1

Lab Name: L.A.S. Contract: BECHTEL

Lab Code: LOCK Case No.: 329BHE SAS No.: _____ SDG No.: L6712L

Matrix (OIL/water): OIL_____ Lab Sample ID: L6712-13_____

Level (low/med): LOW Date Received: 03/29/96

% Solids:	100.0
-----------	-------

Concentration Units (ug/L or MG/L dry weight): MG/L

[illegible]

Color Before: YELLOW Clarity Before: CLOUDY Texture: OIL

Color After: YELLOW Clarity After: CLEAR Artifacts:

Comments:

OIL

FORM I - IN

0032

INORGANIC ANALYSES DATA SHEET ¹

BOH8V2

Concentration Units (ug/L or MG/L dry weight): MG/L

[illegible]

Comments:

OIL

0033

1

CLIENT ID NO.

BOH8V4

% Solids:	100.0
-----------	-------

Concentration Units (ug/L or MG/L dry weight): MG/L

[illegible]

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

OIL

1

CLIENT ID NO.

Lab Name: L.A.S. _____ Contract: BECHTEL

Lab Code: LOCK Case No.: 329BHE SAS No.: SDG No.: L6712L

Matrix (OIL_/water): OIL_ Lab Sample ID: L6712-16

Level (low/med): LOW__ Date Received: 03/29/96

% Solids:	100.0
-----------	-------

Concentration Units (ug/L or MG/L dry weight): MG/L

[illegible]

Color Before: BLACK_____ Clarity Before: OPAQUE Texture: OIL_____

Color After: YELLOW_____ Clarity After: CLEAR_____ Artifacts: _____

Comments:

OIL

FORM I - IN

0035

1

INORGANIC ANALYSES DATA SHEET

Lab Name: L.A.S. Contract: BECHTEL

Lab Code: LOCK Case No.: 329BHE SAS No.: SDG No.: L6712L

Matrix (OIL /water): OIL Lab Sample ID: L6712-17

Level (low/med): LOW Date Received: 03/29/96

% Solids:	100.0
-----------	-------

Concentration Units (ug/L or MG/L dry weight): MG/L

[illegible]

Color Before: YELLOW_____ Clarity Before: CLOUDY Texture: OIL_____

Color After: YELLOW Clarity After: CLEAR Artifacts: _____

Comments:

OIL

FORM I - IN

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